



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Northern Virginia Regional Office
13901 Crown Court
Woodbridge, VA 22193-1453
(703) 583-3800 fax (703) 583-3801
www.deq.state.va.us

Robert G. Burnley
Director

Gregory L. Clayton
Regional Director

May 7, 2002

Mr. Robert K. MacDowell
39845 the Narrows Road
Waterford, VA 20197

Re: Comments on Draft TMDL for Fecal Coliform Bacteria in Catoctin Creek

Dear Mr. MacDowell:

Thank you for your e-mail dated April 13, 2002, providing comments on the Draft TMDL for Catoctin Creek. The Virginia Departments of Environmental Quality (DEQ) and Conservation & Recreation (DCR) appreciate your suggestions. A list of the comments received on the Catoctin Creek fecal coliform TMDL and of DEQ/DCR responses to them is enclosed.

The Catoctin Creek fecal coliform TMDL was revised to reflect comments received, as appropriate, and was sent to EPA for approval on April 29, 2002. EPA has 30 days to complete the approval process. Following EPA approval, the TMDL will be presented to the State Water Control Board (SWCB) for adoption as a regulation, and later incorporated into the appropriate basin-wide Water Quality Management Plan (WQMP).

The next opportunity for public participation will be the development of the TMDL Implementation Plan. It is during this process that issues such as specific management practices and implementation milestones will be discussed and prioritized. Currently, we anticipate that a TMDL Implementation Plan will be developed within the next two years. Implementation of load reduction strategies is expected to occur within five years of Implementation Plan development.

We look forward to your continued participation in the effort to restore water quality in Catoctin Creek.

Sincerely,

A handwritten signature in black ink, appearing to read "Katherine E. Bennett".

Katherine E. Bennett
Regional TMDL Coordinator

Encl.



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Fred W. Fox
Chair, Stream Quality Committee
Loudoun Wildlife Conservancy
33915 Buck Mountain Lane
Bluemont, VA 20135

Re: Comments on Draft TMDL for Fecal Coliform Bacteria in Catoctin Creek

Dear Mr. Fox:

Thank you for your e-mail dated April 22, 2002, providing comments on the Draft TMDL for Catoctin Creek. The Virginia Departments of Environmental Quality (DEQ) and Conservation & Recreation (DCR) appreciate your suggestions. A list of the comments received on the Catoctin Creek fecal coliform TMDL and of DEQ/DCR responses to them is enclosed.

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May 7, 2002

Darrell Schwalm
Team Leader
Loudoun Wildlife Conservancy Stream Quality Project
308 N. Lincoln
Sterling, VA 20164

Re: Comments on Draft TMDL for Fecal Coliform Bacteria in Catoctin Creek

Dear Mr. Schwalm:

Thank you for your e-mail dated April 22, 2002, providing comments on the Draft TMDL for Catoctin Creek. The Virginia Departments of Environmental Quality (DEQ) and Conservation & Recreation (DCR) appreciate your suggestions. A list of the comments received on the Catoctin Creek fecal coliform TMDL and of DEQ/DCR responses to them is enclosed.

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Robert G. Burnley
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Gregory L. Clayton
Regional Director

May 7, 2002

Gem Bingol
Loudoun Wildlife Conservancy Stream Monitoring Project
802 Children's Center Road
Leesburg, VA 20175

Re: Comments on Draft TMDL for Fecal Coliform Bacteria in Catoctin Creek

Dear Ms. Bingol:

Thank you for your e-mail dated April 19, 2002, providing comments on the Draft TMDL for Catoctin Creek. The Virginia Departments of Environmental Quality (DEQ) and Conservation & Recreation (DCR) appreciate your suggestions. A list of the comments received on the Catoctin Creek fecal coliform TMDL and of DEQ/DCR responses to them is enclosed.

The Catoctin Creek fecal coliform TMDL was revised to reflect comments received, as appropriate, and was sent to EPA for approval on April 29, 2002. EPA has 30 days to complete the approval process. Following EPA approval, the TMDL will be presented to the State Water Control Board (SWCB) for adoption as a regulation, and later incorporated into the appropriate basin-wide Water Quality Management Plan (WQMP).

The next opportunity for public participation will be the development of the TMDL Implementation Plan. It is during this process that issues such as specific management practices and implementation milestones will be discussed and prioritized. Currently, we anticipate that a TMDL Implementation Plan will be developed within the next two years. Implementation of load reduction strategies is expected to occur within five years of Implementation Plan development.

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Sincerely,

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Katherine E. Bennett
Regional TMDL Coordinator

Encl.

Comments and responses on the draft TMDL for fecal coliform bacteria in Catoctin Creek

Comments from Robert K. MacDowell

1. *"We attended a meeting where DEQ presented the TMDL concept in Hillsboro, and were absolutely shocked and dismayed to learn that 'straight pipes' are known to exist on Catoctin Creek (pipes from toilets, etc. directly discharging into the creek!!!)."*

The straight pipe estimation was based on data received from the Virginia Department of Health (VDH) for Loudoun County (i.e. 25 straight pipes). The county wide number was used to form a ratio of the number of straight pipes per the number of private residential sewage treatment system. This ratio was applied to the Catoctin Creek watershed to formulate the numbers in Table 4.4.

2. *"We were also surprised that the position was taken that wildlife is responsible for a significant part of the fecal coliform problem."*

The highest exceedances of the geometric mean all occurred in historically low flow periods (Table 2.4). These periods are dominated by in-stream deposition limiting the scenarios to achieve the target to a reduction of livestock direct deposition, wildlife direct deposition, straight pipes, and/or reduction of lateral flow from septic systems within 50 feet of streams. Anthropogenic sources of direct deposition (i.e. livestock direct deposition, straight pipes, and lateral flow from septic systems within 50 feet of streams) were removed and the geometric mean water quality standard could not be met. In order to meet the geometric mean standard, wildlife direct deposition had to be reduced. A significant wildlife signature was observed in the BST results from water samples collected by MapTech, confirming the need to address the wildlife load.

3. *"On a basic level, I have to ask why we allow such abusive things as straight pipes at all and have not done anything about this, and also why we allow cattle to enter streams - not only is it obvious that they contribute large doses of fecal matter, but they also harm the stream banks and impact the riparian buffer, leading to increased turbidity, erosion, silt, etc. Why do we allow this to continue, when we know that proper riparian buffers and good land stewardship definitely help to protect stream water quality?"*

The straight pipe estimation is just that, an estimate. The location of any existing straight pipes is not known. The Commonwealth is optimistic that water quality problems can be resolved through voluntary actions. If the voluntary approach fails, regulatory controls may be pursued.

Comments from Fred Fox

1. *"I commend VADEQ for including Upper South Fork Catoctin within the scope of this study and for purposes of establishing the TMDL. Those of us who have sampled and observed this segment over the years understand it shares the same pollution problems as the other segments and moreover, it would be futile to attempt to address the pollution loading of the lower S. Fork and main stem without accounting for the upper S. Fork."*

DEQ appreciates your support of the decision to include the Upper South Fork of Catoctin Creek in the current TMDL study. By definition, a TMDL study must look at all sources in the watershed. As a result it is highly likely that the controls implemented to restore water

quality in the other three impaired segments would also have had an effect in the Upper South Fork. However, inclusion of this segment in the TMDL allows a more formal record of efforts to restore its water quality.

2. *"I disagree with the suggestion on pg. 1-8 that Virginia (i.e. DEQ) re-designate the Designated Use of Catoctin Creek and its tributaries. In my opinion, VADEQ is bound to the Designated Use that placed this waterbody on the 303(d) list in the first place, i.e., primary contact. Accordingly, it would violate the Administrative Procedures Act and the Virginia Freedom of Information Act to substitute a new and different designated use through the TMDL process. I would maintain that such changes must take place through the public input/public hearing process under the State Water Control Board. Also, EPA would need to agree to this scheme, which is doubtful."*

The purpose of the TMDL is to restore water quality to protect the designated swimming use as measured by the attainment of the water quality standard for fecal coliform bacteria. As we move from the TMDL into the implementation plan development and implementation, the focus of the bacteria reductions will be on the anthropogenic sources of the bacteria. This includes all domestic animals. The goal will be to achieve water quality objectives through bacteria reductions from the anthropogenic sources. If, after all reasonable anthropogenic reductions have been made, the remaining wildlife contributions are sufficient to prevent attainment of the swimming use, then, and only then, would the Commonwealth consider proceeding with a UAA. If a UAA were deemed necessary, it would go through the Commonwealth's extensive public participation process, as required by the Administrative Process Act.

The purpose of Section 1.3.1 is not to suggest that the next step in Catoctin Creek should be a re-designation of the use but merely to present that as an option, should implementation of the reductions proposed in the TMDL prove insufficient to restore water quality in Catoctin Creek.

3. *"I disagree with the statements on pg. 1-8 that the creek is 'inaccessible to children' and 'improving to Swimmable status would create widespread economic burdens.' What part of Catoctin Creek is inaccessible? What child wouldn't find their way to the creek if was in their neighborhood? Economic burden is another myth - Loudoun County and the Catoctin Creek watershed enjoy one of the highest standards of living in the world. That is not to say there should not be some 'means testing' and assistance distributed on the basis of legitimate need, but basically every person and business in the watershed can afford to deploy BMPs and would readily do so if asked or forced by regulation."*

The statements on page 1-8 do not claim that the proposed conditions apply specifically to Catoctin Creek. The purpose of the paragraph is to describe conditions under which the Commonwealth would consider re-designation of a stream's use from swimming to secondary contact. No specific mention of Catoctin Creek is made. The purpose of Section 1.3 is simply to describe options that may be available in the event that implementation of the reductions proposed in the TMDL prove insufficient to restore water quality in Catoctin Creek.

4. *"I disagree with the categorical statement on 1-9 that wildlife populations would not be managed. Where is your documentation that EPA agrees? Wildlife management has been successfully used to reduce Fecal Coliform bacteria in certain shellfishing advisory*

situations, such as on the Eastern Shore. Managing the hunting season for game species and humane trapping and removal of nongame species are certainly good options."

The last sentence of section 1.3.3 has been changed to read: "Clearly, the reduction of wildlife or changing a natural background condition is not the intended goal of a TMDL." DEQ acknowledges that there are cases in which management of wildlife populations might be desirable. The Commonwealth contends, however, that the purpose of the TMDL program is to control anthropogenic sources, both point and nonpoint, of pollution, and not to control natural background sources such as wildlife.

5. *"I was disappointed that, on pg. 3-5 the report has a livestock census that includes 300 swine on the Upper S. Fork, but no mention of the status of agricultural BMPs associated with these animals. As the domestic species with the highest FC concentration, management of these animals would be of paramount concern."*

The swine waste is collected in a lagoon and is land applied according to an approved nutrient management plan. The reductions in FC concentrations associated with these management practices are accounted for during calibration of the model.

6. *"I disagree with the approach described on pg. 4-9 and 4-10 for estimating 'direct deposition' of animal waste into receiving streams. I believe it would take habitat assessments or remote sensing to estimate livestock access to streams, rather than numbers plucked out of the air based on 'consultations.'"*

The numbers were developed using an orderly and defensible scientific basis, contrary to that suggested by this comment. As stated in the report, the proportion of time cows spend in access areas was calculated based on the livestock inventory conducted by Ferrum College and reported by MapTech (1999a), unpublished research data by Virginia Tech, and consultation with the Loudoun Soil and Water Conservation District (LSWCD), Natural Resources Conservation Service (NRCS), and Virginia Cooperative Extension (VCE). The livestock inventory from Ferrum College was based on farmer surveys whereby the farmers estimated the number of hours that their animals spend per day in these areas. The study being performed by Virginia Tech and MapTech (funded by VA Department of Conservation and Recreation) is using video surveillance on seven farms to quantify cow movement to stream access areas. Consultation received from local agencies was based on countless years of experience working with farmers to implement BMPs addressing livestock stream access. Confidence in the stream access estimation was high after investigating the above sources. According to the literature review performed by MapTech, study results quantifying the stimulus response of livestock defecation while in stream access areas could not be found. As a result, the division of waste between direct and land-based loads was formulated from preliminary field research conducted by MapTech in the top three livestock producing areas of Virginia. Based on the above information, it was determined that the direct loading estimation was the most appropriate available at this time. MapTech is in strong agreement that future studies to improve this estimate should be a priority.

"Also, I doubt the statement that non-cattle livestock (horse, sheep, donkey, and goat) 'do their business' strictly on pastures."

From this comment, it is unclear as to additional land uses that may apply. In the case of horses, it was assumed that collected manure from stables would be spread on pasture. In

addition, after discussions with LSWCD, VCE, and NRCS, it was concluded that horses do not constitute a significant direct deposition load based on the following:

1. "Horses get treated better than humans."
2. Majority of horses are provided alternative water in stable or pasture.
3. "Potomac Fever Scare" prompted horse owners to restrict access to streams.
4. Felt that the load from horses would be accounted for in the calibration.

As a result, the calibrated model represented direct loads for all livestock. As such, the allocations called for reductions from all livestock with stream access.

For sheep and goats, the FC load was distributed on pasture only. Loads from donkeys were grouped with horses.

7. *"MapTech is a very capable consulting company staffed by well-qualified experts. However, I have serious doubts about the accuracy of their impairment models (section 4, multiple pages). It is no secret that this watershed and most of Virginia are in the grips of a drought of approx. 4 years duration. During the timeframe when the models were calculated, in my opinion, there was insufficient precipitation (esp. intense events), to formulate an accurate model. Accordingly, I believe these models overestimate and give too much weight to wildlife and other direct deposition. There must be additional sampling and the models should be recalibrated based on 'normal,' i.e., intense-long duration precipitation."*

The approach taken to choose a representative hydrologic period for model calibration and validation is outlined below as transcribed from Section 4.5 entitled Selection of Representative Modeling Period. From this thorough evaluation, it was concluded that the modeling periods chosen took into account critical conditions for stream flow, loading, and water quality parameters as required by USEPA regulations at 40 CFR 130.7 (c)(1), and represent the range of hydrologic events observed over a 29-year period.

Selection of the modeling period was based on two factors: availability of data (discharge and water-quality) and the need to represent critical hydrological conditions. Mean daily discharge at USGS Gaging Station #01638480 was available from July 1971 to September 2000. The modeling period was selected to include the VADEQ assessment period from July 1992 through June 1997 that led to the inclusion of the Catoctin Creek segments on the 1998 303 (d) list. The fecal concentration data from this period were evaluated for use during calibration and validation of the model. High concentrations of fecal coliform were recorded in all flow regimes, and a period for calibration and validation was chosen based on the overall distribution of wet and dry seasons. The mean daily flow and precipitation for each season were calculated for the period July 1971 through September 2000. This resulted in 29 observations of flow for each season. The mean daily precipitation for each season was calculated for the period January 1930 through July 2001. This resulted in 65 observations of precipitation each season. The mean and variance of these observations were calculated. Next, a representative period for modeling was chosen and compared to the historical data. The initial period was chosen based on the availability of mean discharge data closest to the fecal coliform assessment period (1/90-12/00). The representative period was chosen such that the mean and variance of each season in the modeled period was not significantly different from the historical data (Table 4.6). Therefore, the period was selected as representing the historical hydrologic regime of the study area, accounting for critical conditions associated with all potential sources within the watershed. The resulting period for hydrologic calibration was October 1990 through September 1995. For hydrologic validation, the period selected was October 1995 through September 1999.

8. *"Wow! I was certainly impressed with the 'sensitivity analysis' graphics on pg. 5-4 to 5-11. Now, could someone give us the Load Allocations in plain English?"*

The TMDL allocations are outlined in Section 5.3 entitled Scenario Development. Load reduction scenarios are depicted in Tables 5.5 - 5.8. A graphical depiction of the geometric mean is represented in Figures 5.8 - 5.11. Land-based and direct loads associated with the final TMDL allocation are listed in Tables 5.9 - 5.16. Table 5.17 lists the final TMDL loads on an annual basis. Simply stated, direct discharges of fecal matter (i.e. straight pipes and direct deposition from livestock and wildlife) dominate the fecal coliform geometric mean violations in Catoctin Creek and therefore the load allocations targeted these sources.

"Also, I only see monthly allocations depicted on these graphics - what is the Daily allocation?"

To improve clarity of the graphical depiction of sensitivity analysis results, a maximum monthly geometric mean was presented. It was determined that the model response was evident at this time-step.

9. *"I disagree with the statement on pg. 6-3: 'The Commonwealth intends for this TMDL to be implemented through best management practices (BMPs) in the watershed.' This implies a strictly voluntary, rather than a regulatory approach. My understanding is that the TMDL will be adopted as a regulation by the State Water Control Board. Accordingly, it becomes an enforceable standard and the Draft Report can and must be expanded to portray options for implementing the TMDL as a regulation."*

The TMDL will be submitted to the State Water Control Board for approval and will become regulation once adopted. Therefore, the Commonwealth will be required to comply with the pollutant loadings identified in the TMDL. However, the Commonwealth intends to use the existing regulatory and incentive-based programs to implement measures to achieve the pollutant reductions outlined in the TMDL. The Commonwealth is optimistic that water quality problems can be resolved through voluntary actions. If the voluntary approach fails, regulatory controls may be pursued.

10. *"Again, it must be re-stated that the draft report places too much emphasis on wildlife sources and seems to conclude that there is no point in trying to implement a TMDL because of those pesky critters. This is a 'glass is half-empty' approach. Instead, let's do everything possible to eliminate existing sources and to protect the creek with vegetated buffers. I predict that the results would be very positive and many unaccountable sources of FC, incl. wildlife will be filtered and assimilated by riparian buffers."*

The Commonwealth is required and fully intends to implement the TMDL. Section 6 of the report describes the staged implementation approach that the Commonwealth intends to take, addressing "the sources with the largest impact on water quality first." This staged implementation approach will allow "for the evaluation of the adequacy of the TMDL in achieving the water quality standard." Wildlife is a source of fecal coliform bacteria in Catoctin Creek, and it is entirely possible that we will still see water quality violations after all sources except wildlife have been eliminated. However that cannot and will not be known until controllable sources in the watershed have been reduced to the maximum extent practicable, i.e. until the implementation phase.

Comments from Darrell Schwalm

1. *"COMMENT #1 – We support the TMDL process and MOST of the draft report for Catoctin Creek. We want to be involved in developing a practical implementation plan following the recommendations and steps outlined in the draft TMDL."*

The Commonwealth appreciates your support and encourages your participation in the implementation plan development process.

2. *"COMMENT #2 – DEQ has got to be out of their minds! Why are you using such a positive program that can be widely supported as a vehicle to introduce an unnecessary controversial issue? The only thing that Mr. Charles Martin accomplished at the meeting was to make your potential supporters wary of DEQ's preconceived conclusions that the TMDL process will fail. Particularly when this is a conclusion not supported by the data. Because of this, you are forcing us to turn what should be positive comments about the TMDL report into negative comments about DEQ's preconceived notions and potential half-hearted efforts."*

Section 1.3 does not mean that a UAA is planned for Catoctin Creek. Rather, it is only meant to describe the two efforts regarding the change from fecal coliform to E.coli and the addition of a secondary contact criterion. The current rulemaking does not include any proposals to apply the secondary contact use to specific waterbodies. Applying the secondary contact criterion to Catoctin Creek, or any specific waterbody, could not happen until after a Use Attainability Analysis has been performed. The requirements of a UAA are also listed in section 1.3.

Any change to the existing standard as it relates to Catoctin Creek specifically could not occur until after some implementation period. If we are unsuccessful in meeting the primary contact standard in Catoctin Creek after all possible BMPs have been installed, then a UAA process could be initiated to change from the primary contact use to the secondary contact use.

DEQ has not concluded that the TMDL in Catoctin Creek will fail. The Commonwealth is committed to implementing the TMDL using a staged approach that will allow evaluation of the effectiveness of controls as they are implemented. Implementation plans have only been written for 11 waterbodies in Virginia, and implementation began in the Fall of 2001. We do not yet know how effective or ineffective these implementation plans will be. One of the conditions of moving ahead with a UAA is that other practicable options have been tried and failed. The Commonwealth contends, therefore, that the most prudent course of action is to proceed with reductions in controllable sources and assess their impact on water quality before considering a UAA.

3. *"Section 1.3 does not explicitly state that DEQ is currently reviewing its water quality standards with respect to fecal coliform bacteria in Catoctin Creek. If in fact DEQ is not doing this review, then section 1.3 is premature and inappropriately included in the Catoctin report. DEQ has other mechanisms to advise the public that you are taking steps to create a secondary contact use standard on a statewide basis. Including it in the report and making public statements that fecal contamination from wildlife in the Catoctin Creek watershed will prevent attainment of standards sends a loud message that there is no need to work at an implementation plan because in the end DEQ is going to say it can't be done and change the standard."*

DEQ is not currently reviewing its water quality standards with respect to fecal coliform bacteria in Catoctin Creek. The purpose of Section 1.3 is simply to describe options that may be available in the event that implementation of the reductions proposed in the TMDL prove insufficient to restore water quality in Catoctin Creek. The Commonwealth does not agree with the commentor's assertion that it is premature to describe potential options in the TMDL.

4. *"The Catoctin Creek TMDL report does not provide data to support the need for a UAA study at this time. The model shows that applying BMPs to exclude livestock from the creeks will achieve a 95% compliance with water quality standards in the Upper South Fork, 94% in the North Fork, 97% in the Lower South Fork, and 96% in the main stem (p. 5-23 – 5-24). The residual 3% to 6% exceedances are only based upon one period of 'particularly low flows . . . equal to the twenty year low.' (p. 5-13 - 5-14). Since there is at least a 10% margin of error in the model (per MapTech comments at 3/02 public meeting), it is likely that the standards will be fully met once BMPs are installed."*

The Commonwealth agrees that there is not enough evidence to support the need for a UAA in Catoctin Creek at this time. The Commonwealth is committed to proceeding with reductions in controllable sources and assessing their impact on water quality before considering a UAA.

5. *"MapTech, Inc. recognizes that existing data is very limited and has only limited applicability. They state: 'While the short time-frame available, and the subsequent small number of observations taken in this case makes drawing conclusions difficult, the data collected will provide insight . . . aid in . . . and will improve chances' (p. 2-7). They also state that: 'Due to the time constraints of the contract, an assessment of seasonal impacts could not be performed on (these) data' (p. 2-8). Further, 'measurement uncertainty also introduces errors in the model calibration . . . during events that produce high pollutant concentrations' (p. 5-11 – 5-12)."*

EPA requires TMDLs to be developed based on available data. The Commonwealth contends that a staged approach to implementation will provide a measure of quality control, given the uncertainties that exist in any model, and will allow evaluation of the adequacy of the TMDL in achieving the water quality standard.

6. *"Standards are least likely to be met at times of low flows (p. 5-13). Yet it is at low flows that there is the most error in the model. Table 4.9 in the report (p. 4-22) shows that the percent error for the 'total of lowest 50% of flows' is 38.5%, and the % error for 'summer flow volume' is 19.5%. These error rates in the model are particularly significant because 'water quality concentrations are highly dependent upon flow conditions,' and 'the concentration of fecal coliform is particularly variable' (p. 4-25)."*

Table 4.9 refers to the validation results for the period October 1995 through September 1999. The goal of validation is to assess the capability of the model in hydrologic conditions other than those used during calibration with no parameter adjustments. In general, the percent error is typically higher for validation. It was decided to use 15-minute precipitation during the validation period in order to make a comparable evaluation of the model response with respect to the model response during the hydrology calibration period. However, starting in January 1998, only daily precipitation values were available. As a result, daily precipitation values from January 1998 to September 1999 were transformed to 15-minute

values using an SCS-Type II storm distribution. Precipitation was distributed throughout the day, thereby lessening the precipitation intensity. The transformation resulted in an overestimation of low flows and an underestimation of high flows during January 1998 to September 1999 that translated into the overall statistics for the validation period. Estimation of summer flow volume can be particularly challenging due to localized storms that are more likely to occur during this period. A percent error of 20% during calibration is considered acceptable with this criterion relaxed more for validation.

Table 4.8 lists calibration results showing a 7.91% and 7.00% overestimation of low flow and summer flow volume, respectively. Both percentages are well within established criteria for a "good fit" model. After review of calibration and validation results, it was concluded that the model response was accurate and applicable in varying hydrologic conditions.

7. *"DEQ does not have sufficient resources to make a UAA study for Catoctin Creek watershed a priority. Table 1 summarizes changes made by DEQ in 2001 that resulted in substantial reductions in water quality monitoring in Loudoun County. This table shows that the number of monitoring stations has been reduced from 23 to 12, and the number of samples reduced from 174 in 1999 to 72 in 2001."*

The Commonwealth is not proposing proceeding with a UAA at this time.

8. *"Another indication of DEQ's insufficient resources is the fact they have stopped monitoring fecal coliform bacteria in the Catoctin Creek Watershed. Table 2 shows the water quality sampling accomplished by DEQ between the period 7/1/01 and 3/02/02. No samples were collected in the Catoctin Creek watershed. Between 7/1/00 and 6/30/01 DEQ collected 31 sets of samples. The Catoctin Creek TMDL report states that DEQ 'will continue to monitor Catoctin Creek in accordance with its ambient monitoring program (p. 6-1).' The report also states that 'water quality monitoring during implementation of the TMDL (should) be used to determine if growth trends are impacting water quality (p.5-26).' DEQ has not been able to accomplish this."*

In accordance with the DEQ monitoring plan for the Northern Virginia Regional Office, the watershed monitoring of the Catoctin Creek drainage will be implemented in fiscal years 2004 and 2005. Additionally, a trend monitoring station on the mainstem Catoctin Creek will be established beginning in July 2002. Should additional monitoring be required to evaluate the effectiveness of TMDL implementation measures, the monitoring needs will be evaluated and implemented as necessary.

Comments from Gem Bingol

1. *"My major concern is that DEQ is considering reducing the standards for stream quality in Catoctin Creek before attempting to meet the existing stream standards. As I understand the consultant's report, the expectation is that, even with the planned reductions, the standard may be exceeded by approximately 5% – yet there is a 10% error range – which means that you may actually end up being under the existing standard."*

The Commonwealth is not proposing proceeding with a UAA at this time. The Commonwealth contends that the most prudent course of action is to proceed with reductions in controllable sources and assess their impact on water quality before considering a UAA or change in the designated use in Catoctin Creek.